

BF3

Work Order ID 82258

\*82258\*

March-27-12 2:42:57 PM

Item ID: D3488-042 Accept \*N900040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: Blade Fitting Assembly, RH  
 Start Date: 27/03/2012 Start Qty: 15.00 \*15\* Cust Item ID:  
 Required Date: 10/04/2012 Req'd Qty: 15.00 \*15\* Customer:  
 Reference:

Approvals: Process Plan: ALJ Date: 12/03/27 Tooling: Date: Run Start \*NR1\*  
 QC: Date: SPC (Y/N): Date: Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3488	Rev B								

100 0.00  
 \*100\* DOOSAN LATHE  
 Doosan Memo 0.00  
 Doosan Lathe 1-Turn as per Dwg DSK 101 & Folio FA6272-Deburr  
 15 ✓ 121409

110 0.00  
 \*110\* QC2- Inspect parts off machine FAI/FAIB  
 QC Memo 0.00  
 Quality Control  
 15 ✓ 121409

120 0.00  
 \*120\* HAAS CNC VERTICAL MACHINING #1  
 HAAS 1 Memo 0.00  
 HAAS CNC vertical machine #1 1-Machine as per Folio FA627 & Dwg D34882-Deburr  
 15 12.04.24 (15)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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**\*82258\***

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Item ID: D3488-042

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Blade Fitting Assembly, RH

Stop **\*NS2\***

Start Date: 27/03/2012 Start Qty: 15.00

**\*15\***

Cust Item ID:

Required Date: 10/04/2012 Req'd Qty: 15.00

**\*15\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC2- Inspect parts off machine FAI/FAIB	0.00							
<b>*130*</b>									
QC	Memo	0.00							
Quality Control									
140	QC8- Inspect parts - second check	0.00							
<b>*140*</b>									
QC	Memo	0.00							
Quality Control									
150	Chemical Conversion Coat per QSI005 4.1	0.00							
<b>*150*</b>									
HandFinish	Memo	0.00							
Hand Finishing									

27/ 12-04-24 (x15)

OK 12/04/24

15 x

15 x 12-4-24

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**\*82258\***

Page 3

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 Revision ID: Stop **\*NS2\***  
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 Start Date: 27/03/2012 Start Qty: 15.00 **\*15\*** Cust Item ID:  
 Required Date: 10/04/2012 Req'd Qty: 15.00 **\*15\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 <b>*160*</b> Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00				15X ✓			m-k 12/24/30
	Memo START TIME: 1:50 FINISH TIME: 3:20	0.00							
170 <b>*170*</b> QC Quality Control	QC3- Inspect Part Finish	0.00				15 RH ✓			M 12/05/07
	Memo	0.00							
180 <b>*180*</b> HandFinish Hand Finishing	HandFinishing	0.00				15 RH ✓			M 12/05/07
	Memo Install Inserts as per Dwg D3488	0.00							

m 121134

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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March-27-12 2:42:57 PM

**\*82258\***

Page 4

Item ID: D3488-042

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Blade Fitting Assembly, RH

Start Date: 27/03/2012 Start Qty: 15.00

**\*15\***

Cust Item ID:

Required Date: 10/04/2012 Req'd Qty: 15.00

**\*15\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 <b>*190*</b> QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00  0.00				15	0	125-2	
200 <b>*200*</b> Packaging Packaging	Identify as per dwg & Stock Location: <u>FP-2</u>  Memo	0.00  0.00				15	0	Bluloslor	
210 <b>*210*</b> QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00  0.00						12/5/3	

12-05-2

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

March-27-12 2:43:01 PM

Page 1

Work Order ID: 82258

\*82258\*

Parent Item: D3488-042

\*D3488-042\*

Parent Item Name: Blade Fitting Assembly, RH

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 15.00

Required Qty: 15.00

Comments: IPP Rev:A New Issue 06-02-28 JLM  
IPP Rev:B As per Rev B 06-03-30 JLM  
IPP Rev:C Now On Doosan Lathe JLM Verified BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

ALS7-1032-225

Purchased

No

Each

1,162.000

60

\*AI S7-1032-225\*

INSERT

\*\*

91 12/05/02

Location

Loc Qty

Loc Code

ST282

1162

11121269

160

100896

135

111529

27

118520

1000

D6103-003

Manufactured

No

Each

4.0000

15

\*D6103-003\*

Round Billet, Aluminum

\*\*

SA 12/4/19

Location

Loc Qty

Loc Code

MAT043

4

76982

4

82262

15

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	<b>82258</b>
<b>Description:</b> Blade Fitting, RH / Turning Detail for D3488-1/-2		<b>Part Number:</b>	<b>D3488-2</b>
<b>Inspection Dwg:</b> D3488 / DSK101 <b>Rev:</b> B / D		<b>Page 1 of 2</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
Ø2.150	+/-0.005	2.157	/		Sh-3	De/s
Ø2.780	+/-0.005	2.775	/			
Ø3.125	+/-0.010	3.123	/			
Ø3.346	+/-0.010	3.344	/			
0.125 x 45°	+/-0.010 x +/-0.1°	0.125 x 45°	/			
8.000	+0.030/-0.000	8.020	/			
9.250	+/-0.010	9.250	/			
0.188	+/-0.010	0.187	/			
R0.032	+/-0.010	R0.032	/		R.G.	
R0.062	+/-0.010	R0.062	/		R.G.	
Ø0.297	+0.005/-0.001	0.300	/			
Ø0.430	+/-0.010	0.431	/			
0.100	+/-0.010	0.100	/			
0.125	+/-0.010	0.133	/			
2.620	+/-0.010	2.618	/			
3.500	+/-0.010	3.500	/			
1.005	+/-0.010	1.005	/			
Ø0.484	+0.005/-0.001	0.485	/			
1.180	+/-0.010	1.180	/			
3.150	+/-0.010	3.150	/			
3.070	+/-0.010	3.070	/			
R0.063	+/-0.010	0.060	/			

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

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<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	<b>82258</b>
<b>Description:</b> Blade Fitting, RH / Turning Detail for D3488-1/-2		<b>Part Number:</b>	<b>D3488-2</b>
<b>Inspection Dwg:</b> D3488 / DSK101 <b>Rev:</b> B / D		<b>Page 2 of 2</b>	

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
<b>Milling Section</b>						
Ø0.508	+0.006/-0.001	Ø 0.509	✓		SL08	Vern
0.750	+/-0.010	0.748	✓			
1.500	+/-0.010	1.497	✓		↓	
11.18	+/-0.030	11.1685	✓		Height Gauge	
R0.062	+/-0.010	R.062	✓		Rad Gauge	
0.125	+/-0.010	0.117	✓		SL08	Vern
0.590	+/-0.010	0.5915	✓			
0.793	+/-0.010	0.797	✓			
1.351	+/-0.010	1.344	✓			
1.317	+/-0.010	1.322	✓			
1.802	+/-0.010	1.799	✓		↓	

<b>Measured by:</b>	<i>JS</i>	<b>Audited by:</b>	<i>mk</i>	<b>Prototype Approval:</b>	N/A
<b>Date:</b>	12/04/23	<b>Date:</b>	12/04/24	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	06.03.31	New Issue	KJ/JLM	
B	08.09.19	Reformat P/O D3488-042	KJ/JLM	
C	08.12.02	Dimension 8.000 removed	KJ/JLM	<i>[Signature]</i>

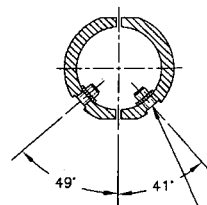
Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
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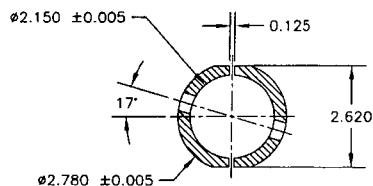
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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NOTE: Date & initial all entries



SECTION B-B

Ø0.297  
C'BORE Ø0.430 x 0.100  
INSTALL ALS4-1032-225 (OR AKS4-1032-225  
OR ALS7-1032-225 OR AKS7-1032-225)  
INSERTS AFTER FINISH  
(4 PLACES)



SECTION A-A

**D3488-041/-042 BLADE FITTING ASSEMBLY PARTS LIST**

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3488-041	BLADE FITTING ASSEMBLY (LH)
	X	D3488-042	BLADE FITTING ASSEMBLY (RH)
1		D3488-1	BLADE FITTING (LH)
	1	D3488-2	BLADE FITTING (RH)
4	4	ALS4-1032-225 or AKS4-1032-225 or ALS7-1032-225 or AKS7-1032-225	INSERT

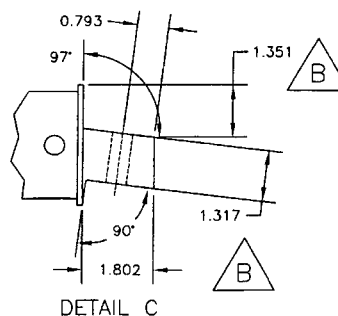
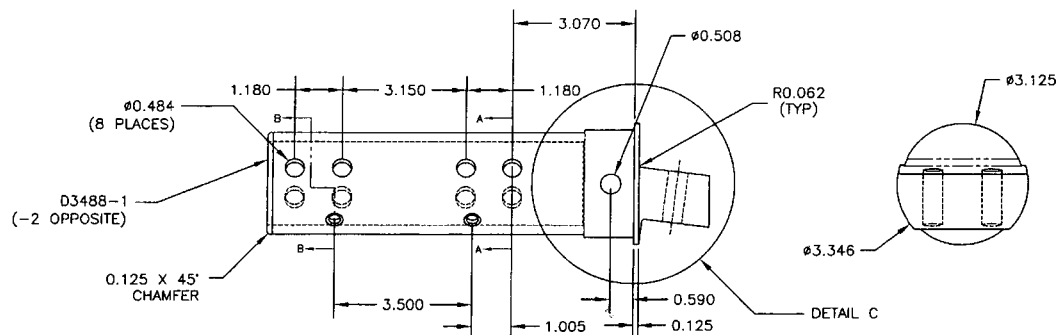
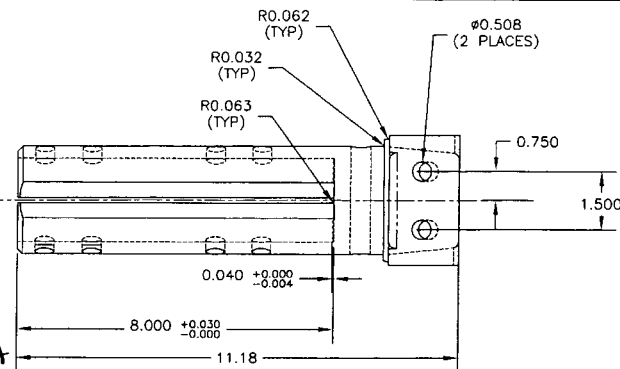
**D3488-041/-042 BLADE FITTING**

- MATERIAL: MAKE D3488-1/-2 FROM ALUMINUM 7075-T7351 ROUND BAR  
PER QQ-A-225/9  
(REF. DART MATERIAL SPEC M7075T73R)
- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1  
POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- INSTALL INSERTS AFTER POWDER COAT
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE

WORK ORDER

NO. 02258 MJS  
12/03/27



DETAIL C

D3488-041 SHOWN (D3488-042 OPPOSITE)

**RELEASED**  
06.03.15 PH  
PER DS  
EIN #737

B	06.03.15	CHANGE THICKNESS
A	05.12.20	NEW ISSUE
DESIGN	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, WA
CHECKED	PH	DRAWING NO. D3488
DATE	06.03.15	TITLE BLADE FITTING
		REV. B SHEET 1 OF 1 SCALE 1:3

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DART AEROSPACE USA, INC.

Dart Aerospace Ltd

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